Florida Department of Education
Curriculum Framework

Course Title: **Introduction to Transportation, Distribution and Logistics**
Course Type: **Orientation/Exploratory**
Career Cluster: **Transportation, Distribution and Logistics**

Secondary – Middle School	
Course Number	9590350
CIP Number	149590350M
Grade Level	6 – 8
Standard Length	Semester
Teacher Certification	Refer to the **Course Structure** section.
CTSO	FL-TSA

Purpose

The purpose of this course is to assist students in making informed decisions regarding their future academic and occupational goals and to provide information regarding careers in the transportation, distribution and logistics career cluster. This includes but is not limited to coherent and rigorous content aligned with the challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the transportation, distribution and logistics career cluster; providing technical skill proficiency, and competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the transportation, distribution and logistics career cluster. Reinforcement of academic skills occurs through classroom instruction and applied laboratory procedures. Instruction and learning activities are provided in a laboratory setting using hands-on experiences with the equipment, materials and technology appropriate to the course content and in accordance with current practices.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Course Structure

The length of this course is one semester. It may be offered for two semesters when appropriate. When offered for one semester, it is recommended that it be at the exploratory level and more in-depth when offered for two semesters.

To teach the course(s) listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the course structure:

Course Number	Course Title	Teacher Certification	Length
9590350	Introduction to Transportation, Distribution and Logistics	AEROSPACE 7G AIR MECH @7 7G AUTO MECH @7 7G DIESEL MECH @7 7G GASENG RPR @7 7G LOG TECH 7G TEC ED 1 @2 ENG&TEC ED1@2 TRANSPORT 7G	Semester

Florida Standards for English Language Development (ELD)

English language learners communicate for social and instructional purposes within the school setting. ELD.K12.SI.1.1

English Language Development (ELD) Standards Special Notes:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. For additional information on the development and implementation of the ELD standards, please contact the Bureau of Student Achievement through Language Acquisition.

Standards

After successfully completing this course, the student will be able to perform the following:

01.0 Demonstrate an understanding of the Transportation Operations career pathway.
02.0 Demonstrate an understanding of the Logistics Planning and Management Services career pathway.
03.0 Demonstrate an understanding of the Warehousing and Distribution Center Operations career pathway.
04.0 Demonstrate an understanding of the Facility and Mobile Equipment Maintenance career pathway.
05.0 Demonstrate an understanding of the Transportation Systems/Infrastructure Planning, Management and Regulation career pathway.
06.0 Demonstrate an understanding of the Health, Safety and Environmental Management career pathway.
07.0 Demonstrate an understanding of the Sales and Service career pathway.
08.0 Apply leadership and communication skills.
09.0 Describe how information technology is used in the Transportation, Distribution and Logistics career cluster.
10.0 Use information technology tools.

Florida Department of Education
Student Performance Standards

Course Title: **Introduction to Transportation, Distribution and Logistics**
Course Number: **9590350**
Course Length: **Semester**

Course Description:
Beginning with a broad overview of the Transportation, Distribution and Logistics career cluster, students are introduced to the terminology, careers, history, required skills, and technologies associated with each pathway in the Transportation, Distribution and Logistics career cluster. Additionally, they will be provided with opportunities to acquire and demonstrate beginning leadership skills.

CTE Standards and Benchmarks	
01.0	Demonstrate an understanding of the Transportation Operations career pathway--The student will be able to:
01.01	Define and use proper terminology associated with the Transportation Operations career pathway.
01.02	Describe some of the careers available in the Transportation Operations career pathway.
01.03	Identify common characteristics of the careers in the Transportation Operations career pathway.
01.04	Research the history of the Transportation Operations career pathway and describe how the associated careers have evolved and impacted society.
01.05	Identify skills required to successfully enter any career in the Transportation Operations career pathway.
01.06	Describe technologies associated in careers within the Transportation Operations career pathway.
02.0	Demonstrate an understanding of the Logistics Planning and Management Services career pathway--The student will be able to:
02.01	Define and use proper terminology associated with the Logistics Planning and Management Services career pathway.
02.02	Describe some of the careers available in the Logistics Planning and Management Services career pathway.
02.03	Identify common characteristics of the careers in the Logistics Planning and Management Services career pathway.
02.04	Research the history of the Logistics Planning and Management Services career pathway and describe how the careers have evolved and impacted society.
02.05	Identify skills required to successfully enter any career in the Logistics Planning and Management Services career pathway.
02.06	Describe technologies associated in careers within the Logistics Planning and Management Services career pathway.
03.0	Demonstrate an understanding of the Warehousing and Distribution Center Operations career pathway--The student will be able to:
03.01	Define and use proper terminology associated with the Warehousing and Distribution Center Operations career pathway.
03.02	Describe some of the careers available in the Warehousing and Distribution Center Operations career pathway.
03.03	Identify common characteristics of the careers in the Warehousing and Distribution Center Operations career pathway.

CTE Standards and Benchmarks	
03.04	Research the history of the Warehousing and Distribution Center Operations career pathway and describe how the careers have evolved and impacted society.
03.05	Identify skills required to successfully enter any career in the Warehousing and Distribution Center Operations career pathway.
03.06	Describe technologies associated in careers within the Warehousing and Distribution Center Operations career pathway.
04.0	Demonstrate an understanding of the Facility and Mobile Equipment Maintenance career pathway--The student will be able to:
04.01	Define and use proper terminology associated with the Facility and Mobile Equipment Maintenance career pathway.
04.02	Describe some of the careers available in the Facility and Mobile Equipment Maintenance career pathway.
04.03	Identify common characteristics of the careers in the Facility and Mobile Equipment Maintenance career pathway.
04.04	Research the history of the Facility and Mobile Equipment Maintenance career pathway and describe how the careers have evolved and impacted society.
04.05	Identify skills required to successfully enter any career in the Facility and Mobile Equipment Maintenance career pathway.
04.06	Describe technologies associated in careers within the Facility and Mobile Equipment Maintenance career pathway.
05.0	Demonstrate an understanding of the Transportation Systems/Infrastructure Planning, Management and Regulation career pathway--The student will be able to:
05.01	Define and use proper terminology associated with the Transportation Systems/Infrastructure Planning, Management and Regulation career pathway.
05.02	Describe some of the careers available in the Transportation Systems/Infrastructure Planning, Management and Regulation career pathway.
05.03	Identify common characteristics of the careers in the Transportation Systems/Infrastructure Planning, Management and Regulation career pathway.
05.04	Research the history of the Transportation Systems/Infrastructure Planning, Management and Regulation career pathway and describe how the careers have evolved and impacted society.
05.05	Identify skills required to successfully enter any career in the Transportation Systems/Infrastructure Planning, Management and Regulation career pathway.
05.06	Describe technologies associated in careers within the Transportation Systems/Infrastructure Planning, Management and Regulation career pathway.
06.0	Demonstrate an understanding of the Health, Safety and Environmental Management career pathway--The student will be able to:
06.01	Define and use proper terminology associated with the Health, Safety and Environmental Management career pathway.
06.02	Describe some of the careers available in the Health, Safety and Environmental Management career pathway.
06.03	Identify common characteristics of the careers in the Health, Safety and Environmental Management career pathway.
06.04	Research the history of the Health, Safety and Environmental Management career pathway and describe how the careers have evolved and impacted society.
06.05	Identify skills required to successfully enter any career in the Health, Safety and Environmental Management career pathway.
06.06	Describe technologies associated in careers within the Health, Safety and Environmental Management career pathway.

CTE Standards and Benchmarks	
07.0	Demonstrate an understanding of the Sales and Service career pathway.--The student will be able to:
07.01	Define and use proper terminology associated with the Sales and Service career pathway.
07.02	Describe some of the careers available in the Sales and Service career pathway.
07.03	Identify common characteristics of the careers in the Sales and Service career pathway.
07.04	Research the history of the Sales and Service career pathway and describe how the careers have evolved and impacted society.
07.05	Identify skills required to successfully enter any career in the Sales and Service career pathway.
07.06	Describe technologies associated in careers within the Sales and Service career pathway.
08.0	Apply leadership and communication skills--The student will be able to:
08.01	Discuss the establishment and history of the FL-TSA organization.
08.02	Identify the characteristics and responsibilities of organizational leaders.
08.03	Demonstrate parliamentary procedure skills during a meeting.
08.04	Participate on a committee which has an assigned task and report to the class.
08.05	Demonstrate effective communication skills through delivery of a speech, a slide presentation, or conducting a demonstration.
08.06	Use a computer to assist in the completion of a project related to the Transportation, Distribution and Logistics career cluster.
09.0	Describe how information technology is used in the Transportation, Distribution and Logistics career cluster--The student will be able to:
09.01	Identify information technology (IT) careers in the Transportation, Distribution and Logistics career cluster, including the responsibilities, tasks and skills they require.
09.02	Relate information technology project management concepts and terms to careers in the Transportation, Distribution and Logistics career cluster.
09.03	Manage information technology components typically used in professions of the Transportation, Distribution and Logistics career cluster.
09.04	Identify security-related ethical and legal IT issues faced by professionals in the transportation, distribution and logistics career cluster.
10.0	Use information technology tools--The student will be able to:
10.01	Identify the functions of web browsers, and use them to access the World Wide Web and other computer resources typically used in the transportation, distribution and logistics career cluster.
10.02	Use e-mail clients to send simple messages and files to other Internet users.
10.03	Demonstrate ways to communicate effectively using Internet technology.
10.04	Use different types of web search engines effectively to locate information relevant to the transportation, distribution and logistics career cluster.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

MyCareerShines is an interactive resource to assist students in identifying their ideal career and to enhance preparation for employment. Teachers are encouraged to integrate this resource into the program curriculum to meet the employability goals for each student.

Career and Technical Student Organization (CTSO)

The Florida Technology Student Association (FL-TSA) is the intercurricular career and technical student organization for providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's Individual Educational Plan (IEP) or 504 plan or postsecondary student's accommodations' plan to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

In addition to accommodations, some secondary students with disabilities (students with an IEP served in Exceptional Student Education (ESE)) will need modifications to meet their needs. Modifications change the outcomes or what the student is expected to learn, e.g., modifying the curriculum of a secondary career and technical education course. Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

Course Title: **Introduction to Transportation, Distribution and Logistics and Career Planning***
Course Type: **Orientation/Exploratory**
Career Cluster: **Transportation, Distribution and Logistics**

Secondary – Middle School	
Course Number	9590360
CIP Number	149590360M
Grade Level	6 – 8
Standard Length	Semester
Teacher Certification	Refer to the **Course Structure** section.
CTSO	FL-TSA

*Effective July 1, 2017, there is no longer a promotion requirement for middle grades students to complete a Career and Education Planning course. However, these courses will continue to be available and should be taught integrating the eight career and education planning course standards. The MyCareerShines powered by Kuder® career planning system is available free of charge to all Florida middle and high schools to assist students in exploring career options and developing an academic and career plan.

Purpose

The purpose of this course is to assist students in making informed decisions regarding their future academic and occupational goals and to provide information regarding careers in the transportation, distribution and logistics career cluster. This includes but is not limited to coherent and rigorous content aligned with the challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the transportation, distribution and logistics career cluster; providing technical skill proficiency, and competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the transportation, distribution and logistics career cluster. Reinforcement of academic skills occurs through classroom instruction and applied laboratory procedures. Instruction and learning activities are provided in a laboratory setting using hands-on experiences with the equipment, materials and technology appropriate to the course content and in accordance with current practices.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Course Structure

The length of this course is one semester. It may be offered for two semesters when appropriate. When offered for one semester, it is recommended that it be at the exploratory level and more in-depth when offered for two semesters.

To teach the course(s) listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the course structure:

Course Number	Course Title	Teacher Certification	Length
9590360	Introduction to Transportation, Distribution and Logistics and Career Planning	AEROSPACE 7G AIR MECH @7 7G AUTO MECH @7 7G DIESEL MECH @7 7G GASENG RPR @7 7G LOG TECH 7G TEC ED 1 @2 ENG&TEC ED1@2 TRANSPORT 7G	Semester

Florida Standards for English Language Development (ELD)

English language learners communicate for social and instructional purposes within the school setting. ELD.K12.SI.1.1

English Language Development (ELD) Standards Special Notes:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. For additional information on the development and implementation of the ELD standards, please contact the Bureau of Student Achievement through Language Acquisition.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate an understanding of the Transportation Operations career pathway.
02.0 Demonstrate an understanding of the Logistics Planning and Management Services career pathway.
03.0 Demonstrate an understanding of the Warehousing and Distribution Center Operations career pathway.
04.0 Demonstrate an understanding of the Facility and Mobile Equipment Maintenance career pathway.
05.0 Demonstrate an understanding of the Transportation Systems/Infrastructure Planning, Management and Regulation career pathway.
06.0 Demonstrate an understanding of the Health, Safety and Environmental Management career pathway.
07.0 Demonstrate an understanding of the Sales and Service career pathway.
08.0 Apply leadership and communication skills.
09.0 Describe how information technology is used in the Transportation, Distribution and Logistics career cluster.
10.0 Use information technology tools.

Listed below are the eight career and education planning course standards.

11.0 Describe the influences that societal, economic, and technological changes have on employment trends and future training.
12.0 Develop skills to locate, evaluate, and interpret career information.
13.0 Identify and demonstrate processes for making short and long term goals.
14.0 Demonstrate employability skills such as working in a group, problem-solving and organizational skills, and the importance of entrepreneurship.
15.0 Understand the relationship between educational achievement and career choices/postsecondary options.
16.0 Identify a career cluster and related pathways through an interest assessment that match career and education goals.
17.0 Develop a career and education plan that includes short and long-term goals, high school program of study, and postsecondary/career goals.
18.0 Demonstrate knowledge of technology and its application in career fields/clusters.

Florida Department of Education
Student Performance Standards

Course Title: **Introduction to Transportation, Distribution and Logistics and Career Planning**
Course Number: **9590360**
Course Length: **Semester**

Course Description:

Beginning with a broad overview of the transportation, distribution and logistics career cluster, students are introduced to the terminology, careers, history, required skills, and technologies associated with each pathway in the Transportation, Distribution and Logistics career cluster. Additionally, they will be provided with opportunities to acquire and demonstrate beginning leadership skills.

CTE Standards and Benchmarks	
01.0	Demonstrate an understanding of the Transportation Operations career pathway--The student will be able to:
01.01	Define and use proper terminology associated with the Transportation Operations career pathway.
01.02	Describe some of the careers available in the Transportation Operations career pathway.
01.03	Identify common characteristics of the careers in the Transportation Operations career pathway.
01.04	Research the history of the Transportation Operations career pathway and describe how the associated careers have evolved and impacted society.
01.05	Identify skills required to successfully enter any career in the Transportation Operations career pathway.
01.06	Describe technologies associated in careers within the Transportation Operations career pathway.
02.0	Demonstrate an understanding of the Logistics Planning and Management Services career pathway--The student will be able to:
02.01	Define and use proper terminology associated with the Logistics Planning and Management Services career pathway.
02.02	Describe some of the careers available in the Logistics Planning and Management Services career pathway.
02.03	Identify common characteristics of the careers in the Logistics Planning and Management Services career pathway.
02.04	Research the history of the Logistics Planning and Management Services career pathway and describe how the careers have evolved and impacted society.
02.05	Identify skills required to successfully enter any career in the Logistics Planning and Management Services career pathway.
02.06	Describe technologies associated in careers within the Logistics Planning and Management Services career pathway.
03.0	Demonstrate an understanding of the Warehousing and Distribution Center Operations career pathway--The student will be able to:
03.01	Define and use proper terminology associated with the Warehousing and Distribution Center Operations career pathway.

CTE Standards and Benchmarks	
03.02	Describe some of the careers available in the Warehousing and Distribution Center Operations career pathway.
03.03	Identify common characteristics of the careers in the Warehousing and Distribution Center Operations career pathway.
03.04	Research the history of the Warehousing and Distribution Center Operations career pathway and describe how the careers have evolved and impacted society.
03.05	Identify skills required to successfully enter any career in the Warehousing and Distribution Center Operations career pathway.
03.06	Describe technologies associated in careers within the Warehousing and Distribution Center Operations career pathway.
04.0	Demonstrate an understanding of the Facility and Mobile Equipment Maintenance career pathway--The student will be able to:
04.01	Define and use proper terminology associated with the Facility and Mobile Equipment Maintenance career pathway.
04.02	Describe some of the careers available in the Facility and Mobile Equipment Maintenance career pathway.
04.03	Identify common characteristics of the careers in the Facility and Mobile Equipment Maintenance career pathway.
04.04	Research the history of the Facility and Mobile Equipment Maintenance career pathway and describe how the careers have evolved and impacted society.
04.05	Identify skills required to successfully enter any career in the Facility and Mobile Equipment Maintenance career pathway.
04.06	Describe technologies associated in careers within the Facility and Mobile Equipment Maintenance career pathway.
05.0	Demonstrate an understanding of the Transportation Systems/Infrastructure Planning, Management and Regulation career pathway--The student will be able to:
05.01	Define and use proper terminology associated with the Transportation Systems/Infrastructure Planning, Management and Regulation career pathway.
05.02	Describe some of the careers available in the Transportation Systems/Infrastructure Planning, Management and Regulation career pathway.
05.03	Identify common characteristics of the careers in the Transportation Systems/Infrastructure Planning, Management and Regulation career pathway.
05.04	Research the history of the Transportation Systems/Infrastructure Planning, Management and Regulation career pathway and describe how the careers have evolved and impacted society.
05.05	Identify skills required to successfully enter any career in the Transportation Systems/Infrastructure Planning, Management and Regulation career pathway.
05.06	Describe technologies associated in careers within the Transportation Systems/Infrastructure Planning, Management and Regulation career pathway.
06.0	Demonstrate an understanding of the Health, Safety and Environmental Management career pathway--The student will be able to:
06.01	Define and use proper terminology associated with the Health, Safety and Environmental Management career pathway.
06.02	Describe some of the careers available in the Health, Safety and Environmental Management career pathway.
06.03	Identify common characteristics of the careers in the Health, Safety and Environmental Management career pathway.
06.04	Research the history of the Health, Safety and Environmental Management career pathway and describe how the careers have evolved and impacted society.

CTE Standards and Benchmarks	
	06.05 Identify skills required to successfully enter any career in the Health, Safety and Environmental Management career pathway.
	06.06 Describe technologies associated in careers within the Health, Safety and Environmental Management career pathway.
07.0	Demonstrate an understanding of the Sales and Service career pathway--The student will be able to:
	07.01 Define and use proper terminology associated with the Sales and Service career pathway.
	07.02 Describe some of the careers available in the Sales and Service career pathway.
	07.03 Identify common characteristics of the careers in the Sales and Service career pathway.
	07.04 Research the history of the Sales and Service career pathway and describe how the careers have evolved and impacted society.
	07.05 Identify skills required to successfully enter any career in the Sales and Service career pathway.
	07.06 Describe technologies associated in careers within the Sales and Service career pathway.
08.0	Apply leadership and communication skills--The student will be able to:
	08.01 Discuss the establishment and history of the FL-TSA organization.
	08.02 Identify the characteristics and responsibilities of organizational leaders.
	08.03 Demonstrate parliamentary procedure skills during a meeting.
	08.04 Participate on a committee which has an assigned task and report to the class.
	08.05 Demonstrate effective communication skills through delivery of a speech, a slide presentation, or conducting a demonstration.
	08.06 Use a computer to assist in the completion of a project related to the Transportation, Distribution and Logistics career cluster.
09.0	Describe how information technology is used in the Transportation, Distribution and Logistics career cluster--The student will be able to:
	09.01 Identify information technology (IT) careers in the Transportation, Distribution and Logistics career cluster, including the responsibilities, tasks and skills they require.
	09.02 Relate information technology project management concepts and terms to careers in the Transportation, Distribution and Logistics career cluster.
	09.03 Manage information technology components typically used in professions of the Transportation, Distribution and Logistics career cluster.
	09.04 Identify security-related ethical and legal IT issues faced by professionals in the Transportation, Distribution and Logistics career cluster.
10.0	Use information technology tools--The student will be able to:
	10.01 Identify the functions of web browsers, and use them to access the World Wide Web and other computer resources typically used in the Transportation, Distribution and Logistics career cluster.
	10.02 Use e-mail clients to send simple messages and files to other Internet users.
	10.03 Demonstrate ways to communicate effectively using Internet technology.

CTE Standards and Benchmarks	
10.04	Use different types of web search engines effectively to locate information relevant to the Transportation, Distribution and Logistics career cluster.
Listed below are the eight career and education planning course standards: The student will be able to**:**	
11.0	Describe the influences that societal, economic, and technological changes have on employment trends and future training.
12.0	Develop skills to locate, evaluate, and interpret career information.
13.0	Identify and demonstrate processes for making short and long term goals.
14.0	Demonstrate employability skills such as working in a group, problem-solving and organizational skills, and the importance of entrepreneurship.
15.0	Understand the relationship between educational achievement and career choices/postsecondary options.
16.0	Identify a career cluster and related pathways through an interest assessment that match career and education goals.
17.0	Develop a career and education plan that includes short and long-term goals, high school program of study, and postsecondary/career goals.
18.0	Demonstrate knowledge of technology and its application in career fields/clusters.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

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Florida Department of Education
Curriculum Framework

Course Title: **Fundamentals of Transportation**
Course Type: **Orientation/Exploratory**
Career Cluster: **Transportation, Distribution and Logistics**

Secondary – Middle School	
Course Number	9590400
CIP Number	149590400M
Grade Level	6 – 8
Standard Length	Semester
Teacher Certification	Refer to the **Course Structure** section.
CTSO	FL-TSA

Purpose

The purpose of this course is to assist students in making informed decisions regarding their future academic and occupational goals and to provide information regarding careers in the transportation, distribution and logistics career cluster. This course provides students with opportunities to become familiar with related careers and develop fundamental technological literacy as they learn about the history, systems, and processes of transportation. In addition, the course will provide an overview of the safe use of tools and equipment used in the industry. Instruction and learning activities are provided in a laboratory setting using hands-on experiences with the equipment, materials and technology appropriate to the course content and in accordance with current practices.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Course Structure

The length of this course is one semester. It may be offered for two semesters when appropriate. When offered for one semester, it is recommended that it be at the exploratory level and more in-depth when offered for two semesters.

To teach the course(s) listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the course structure:

Course Number	Course Title	Teacher Certification	Length
9590400	Fundamentals of Transportation	AEROSPACE 7G AIR MECH @7 7G AUTO MECH @7 7G DIESEL MECH @7 7G GASENG RPR @7 7G LOG TECH 7G TEC ED 1 @2 ENG&TEC ED1@2 TRANSPORT 7G	Semester

Florida Standards for English Language Development (ELD)

English language learners communicate for social and instructional purposes within the school setting. ELD.K12.SI.1.1

English Language Development (ELD) Standards Special Notes:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. For additional information on the development and implementation of the ELD standards, please contact the Bureau of Student Achievement through Language Acquisition.

Standards

After successfully completing this course, the student will be able to perform the following:

01.0 Demonstrate an understanding of the societal impact of transportation.
02.0 Research the history of the transportation industry**.**
03.0 Demonstrate knowledge of service publications by selecting the correct source and locating information found in each.
04.0 Demonstrate an understanding of the major components of ground, air and maritime transportation vehicles.
05.0 Demonstrate knowledge of safety, OSHA, EPA issues and procedures.
06.0 Identify and measure fasteners used in the aerospace, ground and maritime transportation industry.
07.0 Identify, select and use the proper tool for a given fastener or job.
08.0 Identify and measure components of an engine used in the aerospace, ground and maritime transportation industry.
09.0 Inspect an aerospace, ground and maritime transportation vehicle for maintenance needed for safe operation.
10.0 Demonstrate an understanding of basic electricity and electronics.
11.0 Demonstrate knowledge of current and alternative fuel sources.
12.0 Use visual and verbal communication to present employment and career opportunities in transportation
13.0 Students will develop leadership and interpersonal problem-solving skills through participation in co-curricular activities.
14.0 Identify components of network systems.
15.0 Describe and use communication features of information technology.

Florida Department of Education
Student Performance Standards

Course Title: **Fundamentals of Transportation**
Course Number: **9590400**
Course Length: **Semester**

Course Description:
This course provides students with opportunities to become familiar with related careers and develop fundamental technological literacy as they learn about the history, systems, and processes of transportation. In addition, the course will provide an overview of the safe use of tools and equipment used in the industry.

CTE Standards and Benchmarks	
01.0	Demonstrate an understanding of the societal impact of transportation--The student will be able to:
01.01	Track the evolution of transportation and its impact on society.
01.02	Explain the educational requirements and professional expectations associated with a career in transportation.
01.03	Describe the impact of governmental and political systems on transportation.
01.04	Explain the interaction between transportation industries and social change.
01.05	Explain how transportation made the United States a world leader.
01.06	Describe the relationship between transportation and the environment.
01.07	Explain the importance of a technologically literate workforce to the transportation industry.
02.0	Research the history of the transportation industry--The student will be able to:
02.01	Trace the development of transportation in the United States from a historical perspective.
02.02	Explain the economic impact of the transportation industry at the local and national levels.
02.03	Describe the impact of transportation on a global scale.
02.04	Describe the differences and similarities between ground, air, and maritime travels.
03.0	Demonstrate knowledge of service publications by selecting the correct source and locating information found in each--The student will be able to:
03.01	Identify aerospace, ground and maritime service publications such as; owner's manuals, manufacturer's manuals and electronic service publications and Federal Aviation Regulations.
03.02	Read service publications to retrieve desired information.
03.03	Describe the basic types of troubleshooting charts found in service publications.
04.0	Demonstrate an understanding of the major components of ground, air and maritime transportation vehicles--The student will be able to:

CTE Standards and Benchmarks	
	04.01 Identify and locate important parts of ground, air, and maritime transportation vehicles.
	04.02 Describe the purpose of the fundamental transportation systems.
	04.03 Explain how each transportation system works dependent and independently of each other.
	04.04 Describe the Merchant Marine and Marine Transportation System.
05.0	Demonstrate knowledge of safety, OSHA, EPA issues and procedures--The student will be able to:
	05.01 Define OSHA and how it oversees and provides safety guidelines to the transportation industry.
	05.02 Describe the typical layout and sections of a ground, air and maritime transportation lab.
	05.03 List the types of accidents that can occur in a ground, air and maritime transportation lab.
	05.04 Explain how to prevent ground, air and maritime transportation lab accidents.
	05.05 Describe the general rules for the ground, air and maritime transportation lab.
	05.06 Explain federal, state, and local rules and regulations regarding environmental issues related to the work of the ground, air and maritime transportation industry.
06.0	Identify and measure fasteners used in the aerospace, ground and maritime transportation industry--The student will be able to:
	06.01 Identify the different fasteners such as; screws, bolts, washers, nuts, rivets, etc. that are used in the aerospace, ground and maritime transportation industry.
	06.02 Explain the functions and applications of various fasteners.
	06.03 Demonstrate how to measure fasteners.
	06.04 Identify the proper hand tools and safe uses when working with fasteners used in the aerospace, ground, and maritime transportation industry.
07.0	Identify, select and use the proper tool for a given fastener or job--The student will be able to:
	07.01 Identify common ground, air and maritime transportation hand and power tools and proper uses.
	07.02 List safety rules for common ground, air and maritime transportation hand and power tools.
	07.03 Explain how to maintain and store tools properly.
08.0	Identify and measure components of an engine used in the aerospace, ground and maritime transportation industry--The student will be able to:
	08.01 Introduce and explain the major components of an aerospace/transportation engine.
	08.02 Demonstrate how to properly measure each component.
	08.03 Explain the different instruments used for engine measurements.
	08.04 Discuss various propulsion systems for maritime vessels.
09.0	Inspect an aerospace, ground and maritime transportation vehicle for maintenance needed for safe operation--The student will be able to:

CTE Standards and Benchmarks	
	09.01 Explain the importance of vehicle maintenance.
	09.02 Demonstrate how to check fluid levels, belts, hoses, tires, etc.
	09.03 Demonstrate safe practices while working with fluids.
10.0	Demonstrate an understanding of basic electricity and electronics--The student will be able to:
	10.01 Explain the principles of electricity.
	10.02 Describe the basic electrical circuits.
	10.03 Identify basic electrical and electronic terms and components.
	10.04 Calculate and measure voltage, resistance and amperage.
	10.05 Explain different kinds of aerospace/transportation vehicle wiring.
	10.06 Repair and build electrical circuits.
	10.07 Demonstrate fundamental electrical testing.
11.0	Demonstrate knowledge of current and alternative fuel sources--The student will be able to:
	11.01 Summarize how crude oil is converted to gasoline and diesel fuels.
	11.02 Describe properties of gasoline and diesel fuels.
	11.03 Summarize properties of alternative fuels.
	11.04 Compare and contrast benefits of green fuels and energy production.
12.0	Use visual and verbal communication to present employment and career opportunities in transportation--The student will be able to:
	12.01 Present a technical report to an audience regarding a researched transportation related career using multimedia.
	12.02 Prepare and produce a portfolio representing experiences throughout the course of study.
13.0	Students will develop leadership and interpersonal problem-solving skills through participation in co-curricular activities--The student will be able to:
	13.01 Demonstrate effective communication skills.
	13.02 Participate in teamwork to accomplish specified organizational goals.
	13.03 Demonstrate cooperation and understanding with persons who are ethnically and culturally diverse.
14.0	Identify components of network systems--The student will be able to:
	14.01 Identify structure to access internet, including hardware and software components.
	14.02 Identify and configure user customization features in web browsers, including preferences, caching, and cookies.
	14.03 Recognize essential database concepts.

CTE Standards and Benchmarks	
	14.04 Define and use additional networking and internet services.
15.0	Describe and use communication features of information technology--The student will be able to:
	15.01 Define important internet communications protocols and their roles in delivering basic Internet services.
	15.02 Identify basic principles of the Domain Name System (DNS).
	15.03 Identify security issues related to Internet clients.
	15.04 Identify and use principles of personal information management (PIM), including common applications.
	15.05 Efficiently transmit text and binary files using popular Internet services.
	15.06 Conduct a webcast and related services.
	15.07 Represent technical issues to a non-technical audience.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

MyCareerShines is an interactive resource to assist students in identifying their ideal career and to enhance preparation for employment. Teachers are encouraged to integrate this resource into the program curriculum to meet the employability goals for each student.

Career and Technical Student Organization (CTSO)

The Florida Technology Student Association (FL-TSA) is the intercurricular career and technical student organization for providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's Individual Educational Plan (IEP) or 504 plan or postsecondary student's accommodations' plan to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

In addition to accommodations, some secondary students with disabilities (students with an IEP served in Exceptional Student Education (ESE)) will need modifications to meet their needs. Modifications change the outcomes or what the student is expected to learn, e.g., modifying the curriculum of a secondary career and technical education course. Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

Course Title: **Orientation to Career Clusters**
Course Type: **Orientation/Exploratory**

Secondary – Middle School	
Course Number	8000400
CIP Number	1498999907
Grade Level	6 – 8
Standard Length	Semester
Teacher Certification	Refer to the **Course Structure** section.
CTSO	Any CTSO as appropriate

Purpose

The purpose of this course is to assist students in making informed decisions regarding their future academic and occupational goals and to provide information regarding careers in the seventeen career clusters. This course is a compilation of modules for each of the seventeen career clusters and is designed to provide flexibility in course offerings. Any number of modules can be selected to comprise a course that meets the needs of the students.

The content includes, but is not limited to, the orientation of students to career pathways in the career and technical education field. Reinforcement of academic skills occurs through classroom instruction and applied laboratory procedures. This course is recommended for students in the sixth grade, but not required.

Instruction and learning activities are provided in a laboratory setting using hands-on experiences with the equipment, materials and technology appropriate to the course content and in accordance with current practices.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Course Structure

The length of this course is one semester. It may be offered for two semesters when appropriate. When offered for one semester, it is recommended that it be at the exploratory level and more in-depth when offered for two semesters.

To teach the course(s) listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the course structure:

Course Number	Course Title	Teacher Certification	Length
8000400	Orientation to Career Clusters	ANY FIELD	Semester

Florida Standards for English Language Development (ELD)

English language learners communicate for social and instructional purposes within the school setting. ELD.K12.SI.1.1

English Language Development (ELD) Standards Special Notes:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. For additional information on the development and implementation of the ELD standards, please contact the Bureau of Student Achievement through Language Acquisition.

Standards

After successfully completing this course, the student will be able to perform the following:

01.0 Identify Florida's seventeen career clusters.
02.0 Identify and explore careers in the Agriculture, Food & Natural Resources cluster.
03.0 Identify and explore careers in the Architecture & Construction cluster.
04.0 Identify and explore careers in the Arts, A/V Technology & Communication cluster.
05.0 Identify and explore careers in the Business Management & Administration cluster.
06.0 Identify and explore careers in the Education & Training cluster.
07.0 Identify and explore careers in the Energy cluster.
08.0 Identify and explore careers in the Finance cluster.
09.0 Identify and explore careers in the Government & Public Administration cluster.
10.0 Identify and explore careers in the Health Science cluster.
11.0 Identify and explore careers in the Hospitality and Tourism cluster.
12.0 Identify and explore careers in the Human Services cluster.
13.0 Identify and explore careers in the Information Technology cluster.
14.0 Identify and explore careers in the Law, Public Safety & Security cluster.
15.0 Identify and explore careers in the Manufacturing cluster.
16.0 Identify and explore careers in the Marketing, Sales & Service cluster.
17.0 Identify and explore careers in the Engineering and Technology Education cluster.
18.0 Identify and explore careers in the Transportation, Distribution & Logistics cluster.
19.0 Describe leadership skills.

Florida Department of Education
Student Performance Standards

Course Title: **Orientation to Career Clusters**
Course Number: **8000400**
Course Credit: **Semester**

Course Description:

This course is a broad overview of the seventeen career clusters offered in Florida. This course provides hands-on introductory activities for each career cluster as well as opportunities to acquire and demonstrate beginning leadership skills.

CTE Standards and Benchmarks	
01.0	Identify Florida's seventeen career clusters – the student will be able to:
01.01	List Florida's seventeen career clusters.
01.02	Research the national career clusters website.
01.03	Identify the Career and Technical Student Organizations (CTSO) appropriate for Career and Technical Education (CTE) programs.
01.04	Explain the purpose of a CTSO.
02.0	Identify and explore careers in the Agriculture, Food & Natural Resources cluster – the student will be able to:
02.01	Identify the pathways in the Agriculture, Food & Natural Resources career cluster and the careers in each pathway.
02.02	Describe the types of places that employ individuals who have careers in the Agriculture, Food & Natural Resources career cluster.
02.03	Describe the variety of tasks performed by individuals who have careers in the Agriculture, Food & Natural Resources career cluster.
02.04	List the skills, abilities, and talents needed for careers in the Agriculture, Food & Natural Resources career cluster.
02.05	Identify the level of training and education required for careers in the Agriculture, Food & Natural Resources career cluster.
02.06	Research a career in the Agriculture, Food & Natural Resources career cluster and present findings to the class.
02.07	Apply math, science, and reading skills in the completion of a project or activity related to the Agriculture, Food & Natural Resources career cluster.
03.0	Identify and explore careers in the Architecture & Construction cluster – the student will be able to:
03.01	Identify the pathways in the Architecture & Construction career cluster and the careers in each pathway.

CTE Standards and Benchmarks	
	03.02 Describe the types of places that employ individuals who have careers in the Architecture & Construction career cluster.
	03.03 Describe the variety of tasks performed by individuals who have careers in the Architecture & Construction career cluster.
	03.04 List the skills, abilities, and talents needed for careers in the Architecture & Construction career cluster.
	03.05 Identify the level of training and education required for careers in the Architecture & Construction career cluster.
	03.06 Research a career in the Architecture & Construction career cluster and present findings to the class.
	03.07 Apply math, science, and reading skills in the completion of a project or activity related to the Architecture & Construction career cluster.
04.0	Identify and explore careers in the Arts, A/V Technology & Communication cluster – the student will be able to:
	04.01 Identify the pathways in the Arts, A/V Technology & Communication career cluster and the careers in each pathway.
	04.02 Describe the types of places that employ individuals who have careers in the Arts, A/V Technology & Communication career cluster.
	04.03 Describe the variety of tasks performed by individuals who have careers in the Arts, A/V Technology & Communication career cluster.
	04.04 List the skills, abilities, and talents needed for careers in the Arts, A/V Technology & Communication career cluster.
	04.05 Identify the level of training and education required for careers in the Arts, A/V Technology & Communication career cluster.
	04.06 Research a career in the Arts, A/V Technology & Communication career cluster and present findings to the class.
	04.07 Apply math, science, and reading skills in the completion of a project or activity related to the Arts, A/V Technology & Communication career cluster.
05.0	Identify and explore careers in the Business, Management & Administration cluster – the student will be able to:
	05.01 Identify the pathways in the Business, Management & Administration career cluster and the careers in each pathway.
	05.02 Describe the types of places that employ individuals who have careers in the Business Management & Administration career cluster.
	05.03 Describe the variety of tasks performed by individuals who have careers in the Business Management & Administration career cluster.
	05.04 List the skills, abilities, and talents needed for careers in the Business Management & Administration career cluster.
	05.05 Identify the level of training and education required for careers in the Business Management & Administration career cluster.
	05.06 Research a career in the Business Management & Administration career cluster and present findings to the class.
	05.07 Apply math, science, and reading skills in the completion of a project or activity related to the Business Management & Administration career cluster.

CTE Standards and Benchmarks	
06.0	Identify and explore careers in the Education & Training cluster – the student will be able to:
06.01	Identify the pathways in the Education & Training career cluster and the careers in each pathway.
06.02	Describe the types of places that employ individuals who have careers in the Education & Training career cluster.
06.03	Describe the variety of tasks performed by individuals who have careers in the Education & Training career cluster.
06.04	List the skills, abilities, and talents needed for careers in the Education & Training career cluster.
06.05	Identify the level of training and education required for careers in the Education & Training career cluster.
06.06	Research a career in the Education & Training career cluster and present findings to the class.
06.07	Apply math, science, and reading skills in the completion of a project or activity related to the Education & Training career cluster.
07.0	Identify and explore careers in the Energy cluster – the student will be able to:
07.01	Identify the pathways in the Energy career cluster and the careers in each pathway.
07.02	Describe the types of places that employ individuals who have careers in the Energy career cluster.
07.03	Describe the variety of tasks performed by individuals who have careers in the Energy career cluster.
07.04	List the skills, abilities, and talents needed for careers in the Energy career cluster.
07.05	Identify the level of training and education required for careers in the Energy career cluster.
07.06	Research a career in the Energy career cluster and present findings to the class.
07.07	Apply math, science, and reading skills in the completion of a project or activity related to the Energy career cluster.
08.0	Identify and explore careers in the Finance cluster – the student will be able to:
08.01	Identify the pathways in the Finance career cluster and the careers in each pathway.
08.02	Describe the types of places that employ individuals who have careers in the Finance career cluster.
08.03	Describe the variety of tasks performed by individuals who have careers in the Finance career cluster.
08.04	List the skills, abilities, and talents needed for careers in the Finance career cluster.
08.05	Identify the level of training and education required for careers in the Finance career cluster.
08.06	Research a career in the Finance career cluster and present findings to the class.

CTE Standards and Benchmarks	
	08.07 Apply math, science, and reading skills in the completion of a project or activity related to the Finance career cluster.
09.0	Identify and explore careers in the Government & Public Administration cluster – the student will be able to:
	09.01 Identify the pathways in the Government & Public Administration career cluster and the careers in each pathway.
	09.02 Describe the types of places that employ individuals who have careers in the Government & Public Administration career cluster.
	09.03 Describe the variety of tasks performed by individuals who have careers in the Government & Public Administration career cluster.
	09.04 List the skills, abilities, and talents needed for careers in the Government & Public Administration career cluster.
	09.05 Identify the level of training and education required for careers in the Government & Public Administration career cluster.
	09.06 Research a career in the Government & Public Administration career cluster and present findings to the class.
	09.07 Apply math, science, and reading skills in the completion of a project or activity related to the Government & Public Administration career cluster.
10.0	Identify and explore careers in the Health Science cluster – the student will be able to:
	10.01 Identify the pathways in the Health Science career cluster and the careers in each pathway.
	10.02 Describe the types of places that employ individuals who have careers in the Health Science career cluster.
	10.03 Describe the variety of tasks performed by individuals who have careers in the Health Science career cluster.
	10.04 List the skills, abilities, and talents needed for careers in the Health Science career cluster.
	10.05 Identify the level of training and education required for careers in the Health Science career cluster.
	10.06 Research a career in the Health Science career cluster and present findings to the class.
	10.07 Apply math, science, and reading skills in the completion of a project or activity related to the Health Science career cluster.
11.0	Identify and explore careers in the Hospitality & Tourism cluster – the student will be able to:
	11.01 Identify the pathways in the Hospitality & Tourism career cluster and the careers in each pathway.
	11.02 Describe the types of places that employ individuals who have careers in the Hospitality & Tourism career cluster.
	11.03 Describe the variety of tasks performed by individuals who have careers in the Hospitality & Tourism career cluster.
	11.04 List the skills, abilities, and talents needed for careers in the Hospitality & Tourism career cluster.
	11.05 Identify the level of training and education required for careers in the Hospitality & Tourism career cluster.

CTE Standards and Benchmarks	
	11.06 Research a career in the Hospitality & Tourism career cluster and present findings to the class.
	11.07 Apply math, science, and reading skills in the completion of a project or activity related to the Hospitality & Tourism career cluster.
12.0	Identify and explore careers in the Human Services cluster – the student will be able to:
	12.01 Identify the pathways in the Human Services career cluster and the careers in each pathway.
	12.02 Describe the types of places that employ individuals who have careers in the Human Services career cluster.
	12.03 Describe the variety of tasks performed by individuals who have careers in the Human Services career cluster.
	12.04 List the skills, abilities, and talents needed for careers in the Human Services career cluster.
	12.05 Identify the level of training and education required for careers in the Human Services career cluster.
	12.06 Research a career in the Human Services career cluster and present findings to the class.
	12.07 Apply math, science, and reading skills in the completion of a project or activity related to the Human Services career cluster.
13.0	Identify and explore careers in the Information Technology cluster – the student will be able to:
	13.01 Identify the pathways in the Information Technology career cluster and the careers in each pathway.
	13.02 Describe the types of places that employ individuals who have careers in the Information Technology career cluster.
	13.03 Describe the variety of tasks performed by individuals who have careers in the Information Technology career cluster.
	13.04 List the skills, abilities, and talents needed for careers in the Information Technology career cluster.
	13.05 Identify the level of training and education required for careers in the Information Technology career cluster.
	13.06 Research a career in the Information Technology career cluster and present findings to the class.
	13.07 Apply math, science, and reading skills in the completion of a project or activity related to the Information Technology career cluster.
14.0	Identify and explore careers in the Law, Public Safety & Security cluster–The student will be able to:
	14.01 Identify the pathways in the Law, Public Safety & Security career cluster and the careers in each pathway.
	14.02 Describe the types of places that employ individuals who have careers in the Law, Public Safety & Security career cluster.
	14.03 Describe the variety of tasks performed by individuals who have careers in the Law, Public Safety & Security career cluster.
	14.04 List the skills, abilities, and talents needed for careers in the Law, Public Safety & Security career cluster.

CTE Standards and Benchmarks	
	14.05 Identify the level of training and education required for careers in the Law, Public Safety & Security career cluster.
	14.06 Research a career in the Law, Public Safety & Security career cluster and present findings to the class.
	14.07 Apply math, science, and reading skills in the completion of a project or activity related to the Law, Public Safety & Security career cluster.
15.0	Identify and explore careers in the Manufacturing cluster – the student will be able to:
	15.01 Identify the pathways in the Manufacturing career cluster and the careers in each pathway.
	15.02 Describe the types of places that employ individuals who have careers in the Manufacturing career cluster.
	15.03 Describe the variety of tasks performed by individuals who have careers in the Manufacturing career cluster.
	15.04 List the skills, abilities, and talents needed for careers in the Manufacturing career cluster.
	15.05 Identify the level of training and education required for careers in the Manufacturing career cluster.
	15.06 Research a career in the Manufacturing career cluster and present findings to the class.
	15.07 Apply math, science, and reading skills in the completion of a project or activity related to the Manufacturing career cluster.
16.0	Identify and explore careers in the Marketing, Sales & Service cluster – the student will be able to:
	16.01 Identify the pathways in the Marketing, Sales & Service career cluster and the careers in each pathway.
	16.02 Describe the types of places that employ individuals who have careers in the Marketing, Sales & Service career cluster.
	16.03 Describe the variety of tasks performed by individuals who have careers in the Marketing, Sales & Service career cluster.
	16.04 List the skills, abilities, and talents needed for careers in the Marketing, Sales & Service career cluster.
	16.05 Identify the level of training and education required for careers in the Marketing, Sales & Service career cluster.
	16.06 Research a career in the Marketing, Sales & Service career cluster and present findings to the class.
	16.07 Apply math, science, and reading skills in the completion of a project or activity related to the Marketing, Sales & Service career cluster.
17.0	Identify and explore careers in Engineering and Technology Education – the student will be able to:
	17.01 Identify the pathways in Engineering and Technology Education.
	17.02 Describe the types of places that employ individuals who have careers in Engineering and Technology Education.
	17.03 Describe the variety of tasks performed by individuals who have careers in Engineering and Technology Education.

CTE Standards and Benchmarks	
	17.04 List the skills, abilities, and talents needed for careers in Engineering and Technology Education.
	17.05 Identify the level of training and education required for careers in Engineering and Technology Education.
	17.06 Research a career in Engineering and Technology Education and present findings to the class.
	17.07 Apply math, science, and reading skills in the completion of a project or activity related to the Engineering and Technology Education.
18.0	Identify and explore careers in the Transportation & Logistics cluster – the student will be able to:
	18.01 Identify the pathways in the Transportation & Logistics career cluster and the careers in each pathway.
	18.02 Describe the types of places that employ individuals who have careers in the Transportation & Logistics career cluster.
	18.03 Describe the variety of tasks performed by individuals who have careers in the Transportation & Logistics career cluster.
	18.04 List the skills, abilities, and talents needed for careers in the Transportation & Logistics career cluster.
	18.05 Identify the level of training and education required for careers in the Transportation & Logistics career cluster.
	18.06 Research a career in the Transportation & Logistics career cluster and present findings to the class.
	18.07 Apply math, science, and reading skills in the completion of a project or activity related to the Transportation & Logistics career cluster.
19.0	Describe leadership skills – the student will be able to:
	19.01 Identify the Career and Technical Student Organization(s) that are appropriate for CTE programs in each of the career clusters.
	19.02 Describe the leadership opportunities available to members of the CTSOs identified above.
	19.03 Investigate the CTSOs at your school and/or in your school district (e.g., membership requirements, dues, activities, events).

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

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